

Small Signal Product

## Switching Diode

### FEATURES

- Fast switching speed
- Surface device type mounting
- Moisture sensitivity level 1
- High conductance power dissipation
- For general purpose switching applications
- Pb free version and RoHS compliant
- Packing code with suffix "G" means green compound (halogen-free)



**SOT-363**



### MECHANICAL DATA

- Case: SOT-363 small outline plastic package
- Terminal: Matte tin plated, lead free., solderable  
per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed : 260°C/10s

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P <sub>D</sub>	200	mW
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	80	V
Reverse Voltage	V <sub>R</sub>	57	V
Average Rectified Forward Current	I <sub>F(AV)</sub>	500	mA
Average Rectified Output Current	I <sub>O</sub>	250	mA
Non-Repetitive Peak Forward Surge Current		@ t = 1 μs	4
		@ t = 1 s	1.5
Thermal Resistance (Junction to Ambient)	R <sub>θJA</sub>	625	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to 150	°C

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage	I <sub>R</sub> =100μA V <sub>(BR)</sub>	80	-	V
Forward Voltage	I <sub>F</sub> =5.0mA	0.620	0.715	V
	I <sub>F</sub> =10mA	-	0.855	
	I <sub>F</sub> =100mA	-	1.000	
	I <sub>F</sub> =150mA	-	1.250	
Reverse Leakage Current	V <sub>R</sub> =70V	-	100	nA
	V <sub>R</sub> =75V, T <sub>J</sub> =150°C	-	50	μA
	V <sub>R</sub> =25V, T <sub>J</sub> =150°C	-	30	μA
	V <sub>R</sub> =20V	-	25	nA
Junction Capacitance	V <sub>R</sub> =6V, f=1MHz C <sub>J</sub>	-	3.5	pF
Reverse Recovery Time	I <sub>F</sub> =5mA, V <sub>R</sub> =6V t <sub>rr</sub>	-	4.0	ns

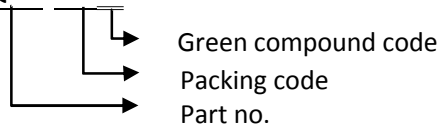
Note 1: Device mounted on FR-4 PCB, 1 inch × 0.85 inch × 0.062 inch

Note 2: Short duration test pulse used to minimize self-heating effect

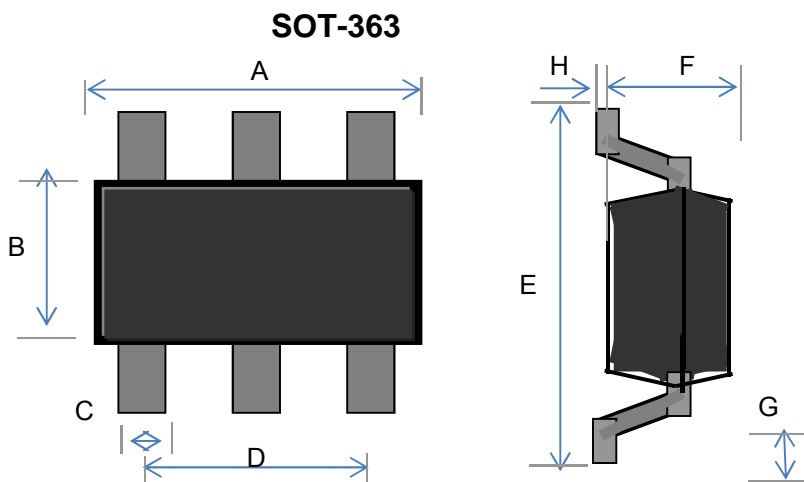
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ORDER INFORMATION (EXAMPLE)

MBD4448HAQW RFG

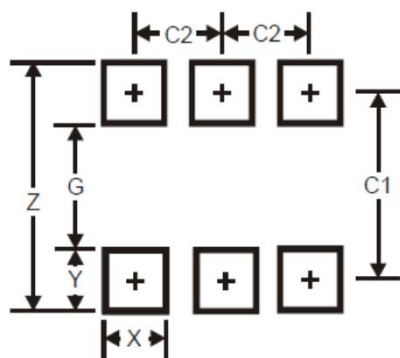


DIMENSIONS



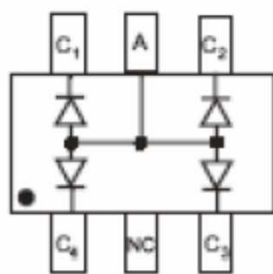
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.00	2.20	0.079	0.087
B	1.15	1.35	0.045	0.053
C	0.15	0.35	0.006	0.014
D	1.20	1.40	0.047	0.055
E	2.15	2.45	0.085	0.096
F	0.85	1.05	0.033	0.041
G	0.25	0.46	0.010	0.018
H	0.00	0.10	0.000	0.004

SUGGESTED PAD LAYOUT

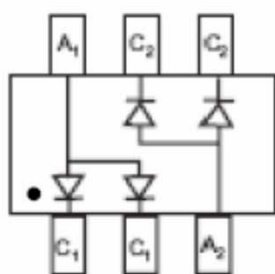


DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
Z	3.20	0.126
G	1.60	0.063
X	0.55	0.022
Y	0.80	0.031
C1	2.40	0.094
C2	0.95	0.037

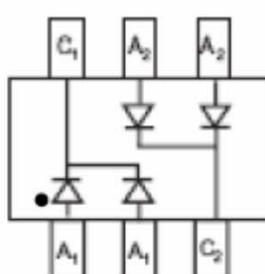
PIN CONFIGURATION



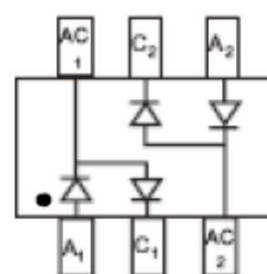
**MBD4448HAQW**



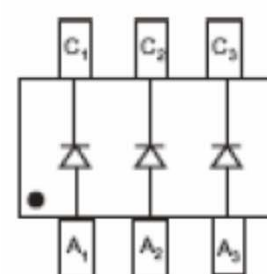
**MBD4448HADW**



**MBD4448HCDW**



**MBD4448HSDW**



**MBD4448HTW**

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## MARKING

Part no.	Marking code
MBD4448HAQW	KA5
MBD4448HADW	KA6
MBD4448HCDW	KA7
MBD4448HSDW	KA8
MBD4448HTW	KAA

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